

Check-Outs and Purchases of Anti-Racist Publications

1. Introduction

During the year 2020, the police killings of George Floyd and other unarmed black people in the United States provided an unprecedented support for the Black Lives Matter (BLM) movement. Millions of people took to the street to protest what they saw as illegal and immoral acts of police violence. The movement encouraged white people to read up on racism in all of its forms and “anti-racist reading lists” were widely circulated online. These lists of titles provide a starting point to analyze the Seattle Public Library (SPL) database. Were anti-racist book titles checked out more (or less) frequently in 2020? Moreover, did the Seattle Public Library purchase more such publications?

2. Anti-Racist Book List Creation

To get a sample of the titles deemed most important by anti-racist activists, I scraped six websites and one Google document maintained by activists. The URLs of these online sources can be found in appendix I. One challenge was to clean the data so that the scraped titles would match those of the SPL database. For this data-cleaning effort, I wrote an API script in R that connects to a database of book titles called ISBNdb. I send the scraped titles to ISBNdb, which returned the most likely title. I assumed that this title would also be the one used. Even though I had the ISBN of each title, this variable is not contained in the SPL database and could therefore not be used for my analysis. The list of titles returned from ISBNdb contained duplicates, which I removed.

Unfortunately, despite several automated cleaning steps, the list of titles still contained some duplicates or some titles that were unsuited for further analysis (e.g. “Their Eyes were Watching God (paperback)”). I therefore manually cleaned the list and removed the remaining duplicates to end up with a total of exact 150 titles (see appendix). The titles were prepared for use with MySQL with Google sheets.

| C | D | E | F | G |
|--|----------------|---|---|---|
| | | "A Black Women's History of the United Sta... x | | |
| "A Black Women's History of the United States" | "A Black Womer | =CONCAT(C2, ", " > History of the United States", | | |

3. Queries

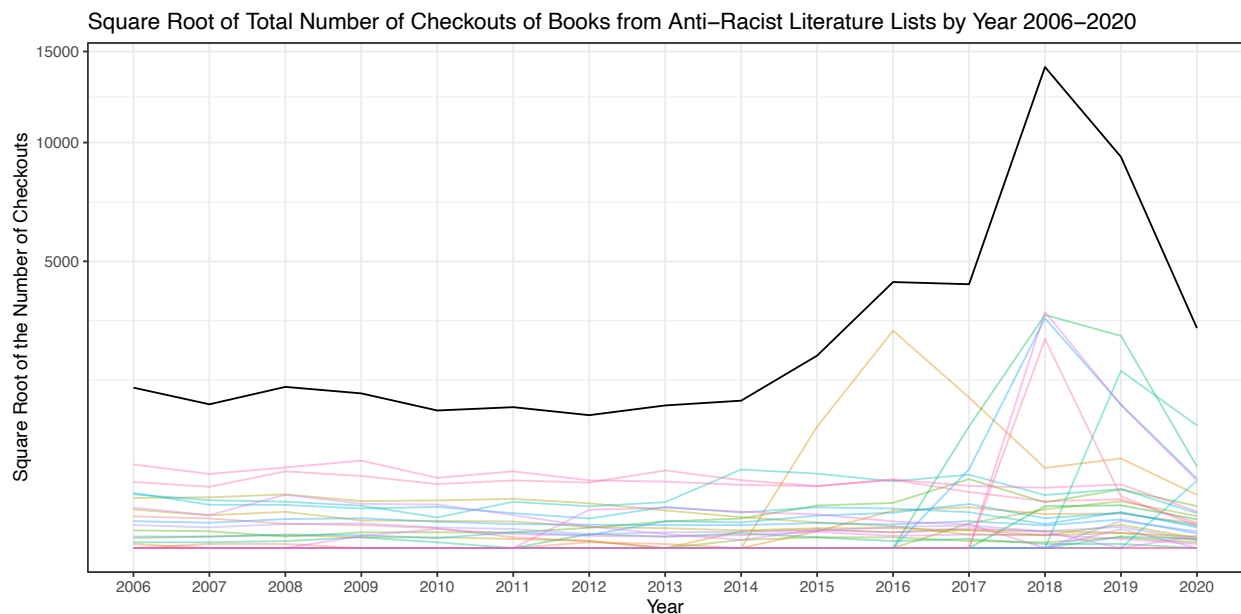
3.1. Overall checkouts by year 2006-today

```
# This query is to see how many anti-racist items were checked out by year in 2020
SELECT YEAR(cout), title, count(title) AS cout_by_year
  FROM spl_2016.outraw
 WHERE title IN (anti-racist-books)
 GROUP BY
   YEAR(cout),
   title;
```

With the goal of gaining an overall idea of the data, I first ran a query to see which books were checked out how often each year. Such a query allows to gain insights into macro trends. Note that in the actual query run by me, “anti-racist-books” was replaced by the actual titles. The result of this query was an aggregated table with 284 rows.

| YEAR(cout) | title | cout_by_year |
|------------|------------------------|--------------|
| 2006 | All about love | 61 |
| 2006 | All American boys | 1 |
| 2006 | Black skin white masks | 6 |
| 2006 | Cane River | 90 |
| 2006 | Dark days | 152 |

Using this table I used R to plot the data (code in appendix). On this plot, the colored lines are individual publications and the black line represents the aggregated totals. Note that I took the square root of the check-out counts (y-axis) to increase the visibility of rarely-checked-out items.



This plot shows that until 2014, the total number of check-outs remained relative stable between 1000-1600 checkouts per year. It then rapidly increased and peaked in 2018 when a total of 14075 titles were checked out. It is noteworthy that most of this increase in check-outs is driven by a few titles, whereas others remain relatively stable throughout the entire time period. The single peak in 2016 represents the book “Between the world and me” by Ta-Nehisi Coates. The titles peaking in 2018 are “The Hate U Give” by Angie Thomas, “Pachinko” by Min Jin Lee, “So You Want to Talk About Race” by Ijeoma Oluo, “Things That Make White People Uncomfortable” by Michael Bennett and Dave Zirin, as well as “How to Be an Antiracist” by Ibram X. Kendi.

The BLM movement was founded in 2013, so the apparent increase in interest might be because of an increased interest in the issue since then. I am unable to explain the apparent

decrease in interest after 2018, although there might be a cyclical trend that would have picked up in 2020 were it not for the pandemic and closure of the SPL.

3.2. Checkouts by week 2020

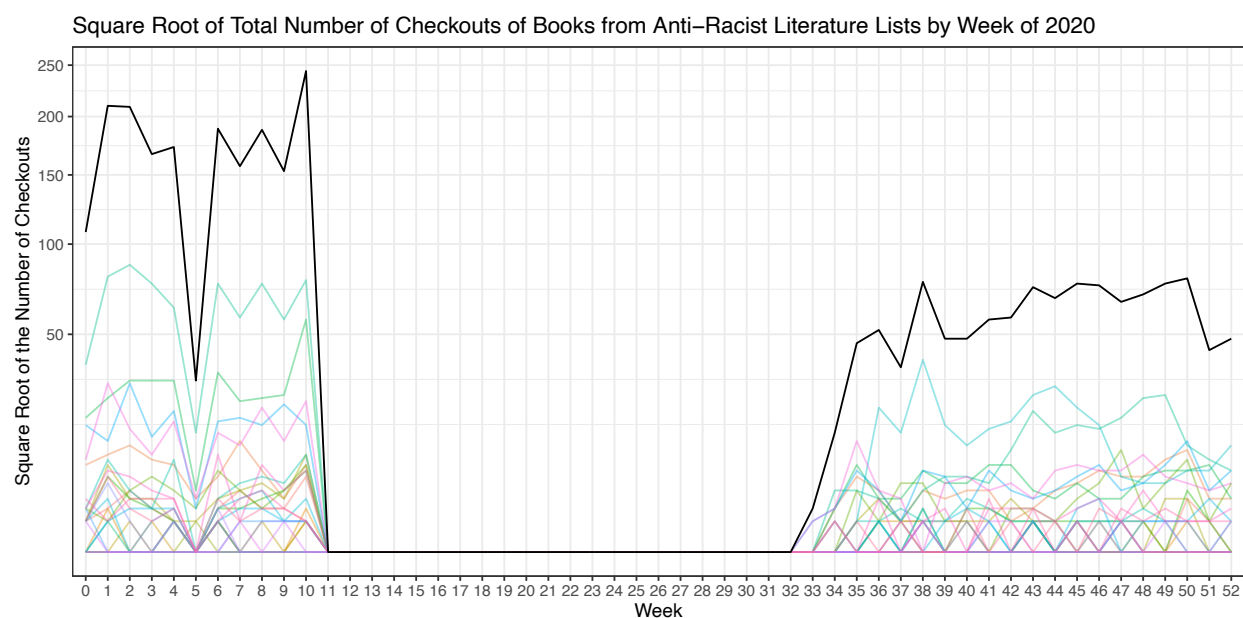
Another interesting question is whether we can see a change in trends due to the enormous BLM protests in 2020. To this end, I aggregated the books checked out in 2020 by week with the following query:

```
# This query is to see how many anti-racist items were checked out by week in 2020
SELECT WEEK(cout), title, count(title) AS cout_by_week
FROM spl_2016.outraw
WHERE title IN (anti-racist-books)
AND
YEAR(cout) = 2020
GROUP BY
WEEK(cout),
title;
```

The resulting table looked like this

| WEEK(cout) | title | cout_by_week |
|------------|--------------------------|--------------|
| 0 | All American boys | 1 |
| 0 | Between the world and... | 8 |
| 0 | Dear Martin | 1 |
| 0 | fire next time | 2 |
| 0 | Ghost boys | 1 |

Using ggplot2 in R, I plotted the data as lines. Note that the y-axis shows the square root of the number of checked-out items.



The most prominent feature of this plot is the drop in check-outs in week 11 (after a brief spike) and the lack of any check-outs until week 33. This is undoubtedly the result of the SPL closure due to the COVID-19 pandemic. The second interesting feature is that the check-out numbers after the closure (which ended on August 10, 2020) are substantially lower than the ones before the closure. This might be because of a stay-at-home recommendation. I am unable to explain the drop in check-outs in week 5, despite some online research.

Overall, the coincidence of the library closure and the BLM protests do not allow me to see whether there was an increased interest in anti-racist literature based on check-out numbers.

3.3. First-Ever Checkout Date

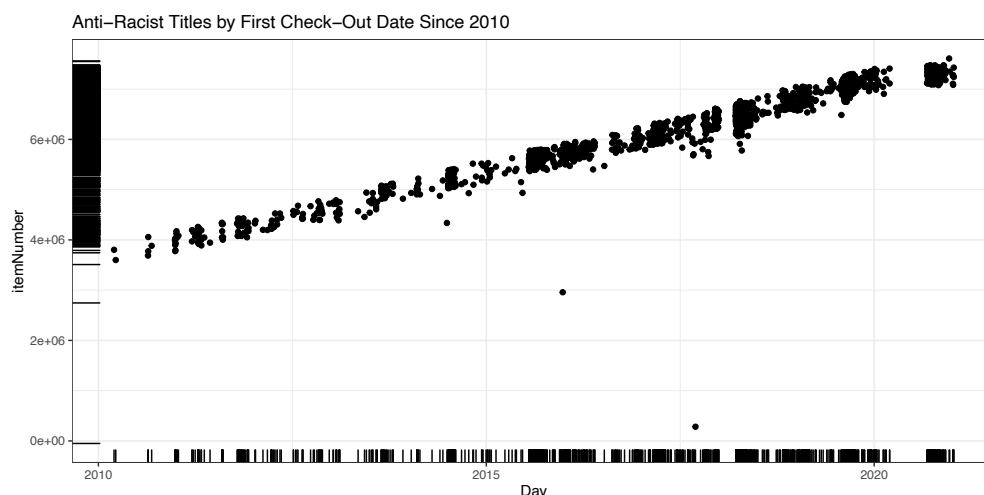
One thing that could be used to see whether the library showed an increased interest in anti-racist literature is to see whether they purchased more such publications than in the previous year. To do that, I run the following query

```
# This query is to see how many anti-racist items were first checked out in 2020
# https://stackoverflow.com/questions/12102200/get-records-with-max-value-for-each-group-of-grouped-sql-
# results
# axiac's response
SELECT o.* #itemNumber, title, cout
      FROM spl_2016.outraw o                # 'o' from 'earliest checkout date of itemNumber'
      LEFT JOIN spl_2016.outraw b          # 'b' from 'earlier checkout date'
      ON o.itemNumber = b.itemNumber AND o.cout > b.cout
WHERE b.cout is NULL # earlier checkout date not found
AND
o.title IN (anti-racist-books)
```

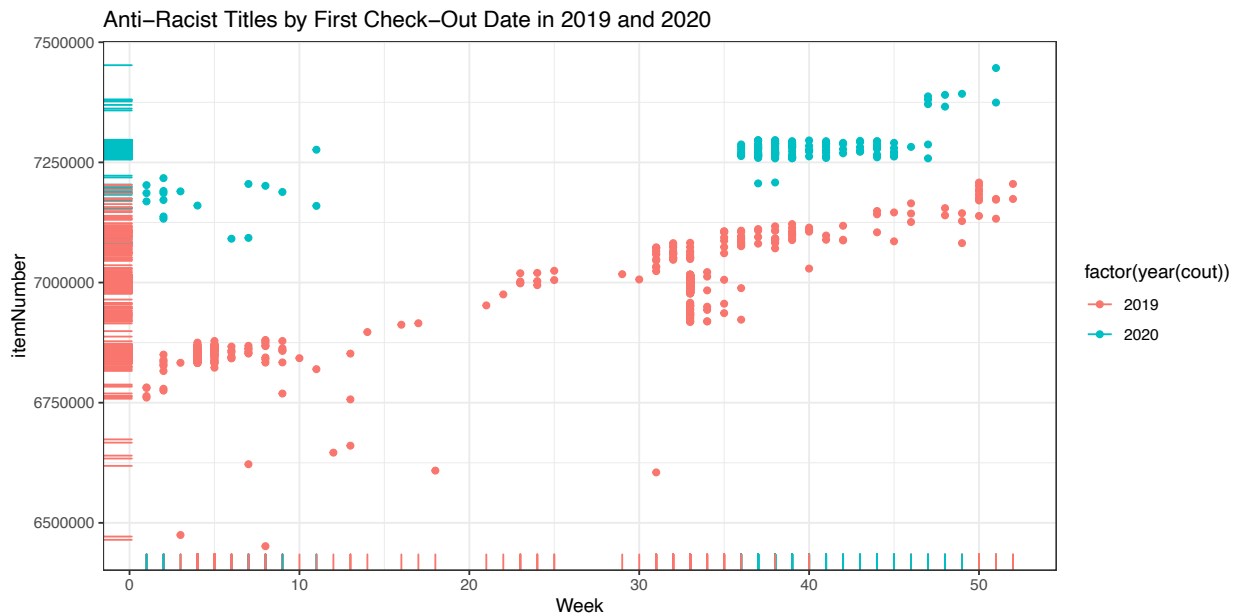
This requests two tables (o and b) and then filters table o in such a way that it only includes the earliest check-out date by title using a left join. The resulting table looks like this:

| id | itemNumber | bibNumber | cout | cin | collcode | itemtype | barcode | title | callNumber | deweyClass | subj |
|--------|------------|-----------|---------------------|------|----------|----------|---------------|----------------|------------------|------------|------|
| 278038 | 1850804 | 2079768 | 2006-01-27 15:51:00 | NULL | nalpfc | acbk | 0010039446439 | All about love | FIC LAURENS | | NULL |
| 338734 | 851653 | 2182235 | 2006-01-31 13:40:00 | NULL | cacd | accd | 0010047096556 | All about love | CD 782.25 C3677A | 782.25 | NULL |
| 357016 | 60813 | 2031226 | 2006-02-01 11:51:00 | NULL | nafic | acbk | 0010046783170 | All about love | FIC LAURENS | | NULL |
| 467094 | 851362 | 2182235 | 2006-02-07 16:12:00 | NULL | nacd | accd | 0010047096523 | All about love | CD 782.25 C3677A | 782.25 | NULL |
| 485765 | 2183770 | 2182235 | 2006-02-08 14:47:00 | NULL | nacd | accd | 0010053376967 | All about love | CD 782.25 C3677A | 782.25 | NULL |

Since the item number is unique and coded sequentially, the item number shows the purchase date relative to other items. By additionally looking at when items were first checked out, we can approximate when the items were purchased. In the following plot, we can see the overall progression of when anti-racist books were added to the collection.



What this plot shows is that more anti-racist literature was added to the collection after 2015 as evidenced by both the item number and the first check-out date which are clustered after 2015. The covid-gap is clearly visible in 2020. In the next plot, I look at the progression of item number and date of first check-out in 2019 and 2020 side-by-side.



What this plot shows is that in 2019, there was a lack of first check-outs between week 10 and week 30. This might have several reasons. Perhaps the budget incentivizes saving towards the beginning of the cycle. It is interesting that a number of books that were added to the collection were all checked out in the same week (week 33). This might be due to releasing these titles to the public on a later date or there might be an event that triggered increased interest during this week.

In 2020, the covid-gap is clearly visible. There do seem to be a number of publications that have roughly the same item number (i.e. were added to the collection around the same time) that have their first check-out date immediately following the opening of the library. This could be indicative of a large purchase of anti-racist books during the closure which saw an increase in interest following the re-opening.

4. Discussion, Conclusion, and Next Steps

Analyzing the SPL database for patterns in purchases and check-out dates of anti-racist books yields some interesting yet inconclusive results. Overall, it can be said that since 2015, the number of check-outs has increased. Covid has apparently decreased the number of check-outs but this was likely the case across all items. There does not seem to be a distinct increase in either new additions or check-outs after the re-opening.

Further analysis of this data is needed. In particular, it would be important to put the additions and check-outs of these books in relation to all other items in the library. Perhaps anti-racist publications fared quite well compared with other books. Moreover, it would be useful to add a timeline of important events for the BLM movement, be it major protests or acts of police brutality. Only then would it be possible to speculate about their causal effect.

5. Appendix

5.1. List of URLs

- https://docs.google.com/document/d/1Wfk_KHTCrMKwFmjP1Po8wvnqslKkyhKCo6OLd9VZ-M2M/edit#heading=h.ix98e3z5secj
- <https://www.bookpeople.com/anti-racist-reading-list>
- <https://chipublib.bibliocommons.com/list/share/204842963/1357692923>
- <https://www.hks.harvard.edu/faculty-research/library-knowledge-services/collections/diversity-inclusion-belonging/anti-racist>
- <https://nymag.com/strategist/article/anti-racist-reading-list.html>
- <https://www.nytimes.com/2019/05/29/books/review/antiracist-reading-list-ibram-x-kendi.html>
- <https://www.phoenixpubliclibrary.org/browse/StaffPicks/Pages/Books/An-Anti-Racist-Reading-List.aspx>

5.2. Scraping Screenshot

The screenshot shows a web scraper interface with a table of selectors. The table has columns: ID, Selector, type, Multiple, Parent selectors, and Actions. The actions column contains buttons for Element preview, Data preview, Edit, and Delete.

| ID | Selector | type | Multiple | Parent selectors | Actions |
|----------------|------------------------------|--------------|----------|------------------|--|
| title | div h2 a | SelectorText | yes | _root | Element preview Data preview Edit Delete |
| year_published | div div.abaproduct-published | SelectorText | yes | _root | Element preview Data preview Edit Delete |
| authors | div div.abaproduct-authors | SelectorText | yes | _root | Element preview Data preview Edit Delete |

Below the table is a button labeled "Add new selector".

5.3. List of Anti-Racist Publications

"A Black Women's History of the United States", "A Different Hunger: Writings on Black Resistance", "A Disability History of the United States (revisioning History)", "A Heavy Load", "A More Beautiful and Terrible History", "A Queer History of the United States (revisioning American History)", "A Taste of Power: a Black Woman's Story", "A Terrible Thing to Waste: Environmental Racism and Its Assault on the American Mind", "Afropean: Notes from Black Europe", "Alex Haley & Malcolm X's the Autobiography of Malcolm x", "All About Love", "All American Boys", "All Boys Aren't Blue", "America's Original Sin: Racism, White Privilege, and the Bridge to a New America", "An African American and Latinx History of the United States", "An Indigenous Peoples' History of the United States", "Anti-racist Teaching", "Antiracist Baby Board Book", "Are Prisons Obsolete?", "Assata", "Between the World and Me", "Between the World and Me", "Beyond the Whiteness of Whiteness", "Biased", "Black and British a Forgotten History", "Black Enough: Stories of Being Young & Black in America", "Black Marxism", "Black Skin White Masks", "Black, Listed: Black British Culture Explored", "Blacker the Berry...", "Born a Crime: Stories from a South African Childhood", "Brit(ish)", "Cane River", "Caste: the Origins of Our Discontents", "Charleston Syllabus: Readings on Race, Racism, and Racial Violence", "Citizen: an American Lyric", "Cold War Civil Rights", "Courageous Conversations About Race", "Crosscurrents: West Indian Immigrants and Race", "Dark Days", "Dear Martin", "Discourse on Colonialism", "Don't Call Us Dead: Poems", "Don't Touch My Hair", "Eloquent Rage", "Fatal Invention", "Feminism, Interrupted: Disrupting Power", "Fire Next Time", "Freedom Is a Constant Struggle", "Ghost Boys", "Girl, Woman, Other", "Good Talk", "Half Has Never Been Told", "Hate U Give", "Heavy", "Hood Feminism", "Hostile Environment: How Immigrants Became Scapegoats", "How Does it Feel to Be a Problem?", "How Europe Underdeveloped Africa", "How to Be an Antiracist", "How to Be Less Stupid About Race", "How to Love a Jamaican", "How We Fight for Our Lives: a Memoir", "How We Fight White Supremacy: a Field Guide to Black Resistance", "How We Get Free", "I Know Why the Caged Bird Sings", "I Will Not Be Erased 'our Stories Growing up as People of Colour'", "I Write What I Like, No Fears Expressed", "I'm Still Here in the Bathtub: Brand New Silly Dilly Songs", "Just Mercy", "Locking up Our Own", "Maya Angelou's I Know Why the Caged Bird Sings", "Me and White Supremacy", "Me and White Supremacy", "Men We Reaped: a Memoir", "Mindful of Race: Transforming Racism from the Inside Out", "N'gga Theory: Race, Language, Unequal Justice, and the Law", "Native Son", "Natives: Race and Class in the Ruins of Empire", "Never Caught", "No Ashes in the Fire", "Notes of a Native Son", "One Person, No Vote", "Pachinko", "Pedagogy of the Oppressed", "Pleasure Activism: the Politics of Feeling Good", "Policing the Black Man", "Policing the Black Man - Arrest, Prosecution, and Imprisonment", "Queenie", "Race Matters", "Race Talk and the Conspiracy of Silence", "Raising White Kids: Bringing up Children in a Racially Unjust America", "Reconstruction", "Redefining Realness", "Reproductive Injustice", "Rest in Power: the Enduring Life of Trayvon Martin", "Revisioning History", "Revolutionary Suicide", "Sensuous Knowledge: a Black Feminist Approach for Everyone", "Sister Outsider", "Sister Outsider: Essays and Speeches", "Slavery by Another Name", "So You Want to Talk About Race", "Stamped from the Beginning", "Tears We Cannot Stop: a Sermon to White America", "The Autobiography of Malcolm x", "The Bluest Eye", "The Broken Heart of America", "The Color of Law", "The Condemnation of Blackness", "The End of Policing", "The Fire Next Time", "The Fire This Time", "The Good Immigrant", "The Making of Asian America: a History", "The New Jim Crow", "The New Negro", "The Origins of the Urban Crisis", "The Other Slavery: the Uncovered Story of Indian Enslavement in America", "The Post-racial Negro Green Book", "The Price for Their Pound of Flesh", "The R Word", "The River of No Return: the Autobiography of a Black Militant and the Life and Death of Sncc", "The Source of Self-regard: Selected Essays, Speeches, and Meditations (vintage International)", "The Warmth of Other Suns: the Epic Story of America's Great Migration", "Their Eyes Were Watching God", "There Ain't No Black in the Union Jack", "They Can't Kill Us All: Ferguson, Baltimore, and a New Era in America's Racial Justice Movement", "Things Fall Apart", "Things That Make White People Uncomfortable", "This Will Be My Undoing: Living at the Intersection of Black, Female, and Feminist in (white) America", "Tommy's Pet", "Unapologetic: a Black, Queer, and Feminist Mandate for Radical Movements", "United States Womens History", "W. E. B. Du Bois's Data Portraits: Visualizing Black America", "Waiting 'til the Midnight Hour", "Warrior Poet: a Biography of Audre Lorde", "Well-read Black Girl", "What Doesn't Kill You Makes You Blacker: a Memoir in Essays", "When They Call You a Terrorist: a Black Lives Matter Memoir", "White Fragility", "White Innocence: Paradoxes of Colonialism and Race", "White Privilege: the Myth of a Post-racial Society", "White Rage", "Why Are All the Black Kids Sitting Together in the Cafeteria?", "Why I'm No Longer Talking to White People About Race", "Will Do Magic for Small Change", "Women, Race, & Class", "Zami Sister Outsider Undersong", "Zami: a New Spelling of My Name"

5.4. Data Cleaning Script

```
library(readr)
library(XML)
library(RCurl)
library(urltools)
library(jsonlite)
library(stringr)

# Load Data

files <- list.files("~/Downloads/", "*.csv", full.names = T)

books <- lapply(files, read_csv)

# Get likely title names

isbndb <- function(title = "their eyes were watching god"){
  params <- "?page=1&pageSize=1&column=title&beta=0"
  title <- URLEncode(title, reserved = F)
  url <- sprintf("https://api2.isbndb.com/books/%s%s", title, params)
  results <- httr::GET(url,
    add_headers(Authorization = "xxx",
      accept= "application/json"))
  jsonRespParsed<-content(results,as="text")
  return(fromJSON(jsonRespParsed)[[2]])
  #return(jsonRespParsed)
}

# Clean titles

filtered_books <- na.omit(unlist(lapply(books, "[[",3)))
filtered_books2 <- gsub("\\\\n.*", "", filtered_books)
filtered_books3 <- gsub("\\\"", "", filtered_books2)
filtered_books4 <- gsub("\\'", "", filtered_books3)
filtered_books5 <- gsub("[O]", "", filtered_books4)

titles2 <- lapply(filtered_books5, function(x) isbndb(x)$title)
titles3 <- lapply(filtered_books5[1:5], function(x) isbndb(x)$title)

clean_titles <- unlist(lapply(titles, names))
clean_titles2 <- unlist(lapply(titles[1:10], names))

unique_clean_titles <- unique(clean_titles)

# Save titles to file

write(sort(unique_clean_titles), "~/Downloads/unique_clean_titles.txt")
```


5.5. Script of Plot by Year

```
library(readr)
library(ggplot2)
library(dplyr)
library(tidyr)

lit_year <- read_csv("~/Documents/anti-racist-lit-by-year.csv")
lit_year_clean <- lit_year %>%
  mutate(year = `YEAR(cout)`,
         count = cout_by_year) %>%
  select(-`YEAR(cout)`, -cout_by_year) %>%
  filter(year <= 2020) %>%
  complete(title, year, fill = list(count = 0))

lit_year_total <- lit_year_clean %>%
  group_by(year) %>%
  summarize(total = sum(count, na.rm = T))

ggplot(lit_year_clean, aes(x = factor(year), y=count, group = title, color = title)) +
  geom_line(alpha = 0.4) +
  scale_color_discrete(breaks="special") + labs(color = "") +
  scale_y_continuous(trans='sqrt') +
  geom_line(data = lit_year_total, mapping = aes(x = factor(year), y = total, group = 1), inherit.aes = F) +
  theme_bw() +
  labs(y = "Square Root of the Number of Checkouts",
       x = "Year",
       title = "Square Root of Total Number of Checkouts of Books from Anti-Racist Literature Lists by Year 2006-2020") +
  scale_x_discrete(breaks=seq(2006, 2020), labels = as.character(seq(2006, 2020)))
```

5.6. Script of Plot by Week

```
#### BY WEEK

lit_week <- read_csv("~/Documents/anti-racist-lit-by-week-2020.csv")
lit_week_clean <- lit_week %>%
  mutate(week = `WEEK(cout)`,
         count = cout_by_week) %>%
  select(-`WEEK(cout)`, -cout_by_week) %>%
  add_row(title = "Dear Martin", week = 11:32, count = 0, .after = 11) %>%
  complete(title, week, fill = list(count = 0))

lit_week_total <- lit_week_clean %>%
  group_by(week) %>%
  summarize(total = sum(count)) %>%
  add_row(week = 11:32, total = 0, .after = 11)

ggplot(lit_week_clean, aes(x = factor(week), y=count, group = title, color = title)) +
  geom_line(alpha = 0.4) +
  scale_color_discrete(breaks="special")+
  scale_y_continuous(trans='sqrt') +
  geom_line(data = lit_week_total, mapping = aes(x = factor(week), y = total, group = 1), inherit.aes = F) +
  theme_bw() +
  labs(y = "Square Root of the Number of Checkouts",
       x = "Week",
       title = "Square Root of Total Number of Checkouts of Books from Anti-Racist Literature Lists by Week of 2020") +
  scale_x_discrete(breaks=seq(0, 52), labels = as.character(seq(0, 52)))
```


5.7. Side-by-Side plots script

```
# LOOK WHETHER MORE ANTI-RACIST LITERATURE WAS BOUGHT

lit_new <- read_csv("~/Documents/anti-racist-lit-new-purchases.csv")
lit_new_clean <- lit_new %>%
  filter(cout >= '2010-01-01')

ggplot(lit_new_clean, aes(x=cout, y=jitter(itemNumber, factor = 1000))) +
  geom_point() +
  geom_rug() +
  theme_bw() +
  labs(y = "itemNumber",
       x = "Day",
       title= "Anti-Racist Titles by First Check-Out Date Since 2010")

library(lubridate)

lit_new_clean %>%
  filter(cout >= '2019-01-01' & cout < '2021-01-01')%>%
  ggplot(aes(x=week(cout), y=jitter(itemNumber, factor = 1000), col = factor(year(cout)),
            group=factor(year(cout)))) +
  geom_point() +
  geom_rug() +
  theme_bw() +
  labs(y = "itemNumber",
       x = "Week",
       title= "Anti-Racist Titles by First Check-Out Date in 2019 and 2020")
```